

A Work Project, presented as part of the requirements for the Award of a Masters  
Degree in Management from the NOVA – School of Business and Economics.

# **Developing a gamification system to increase customer lifetime value at MyGon**

Miguel Pinto, 1830

A project carried out under the supervision of:

Elizabete Cardoso

June 2015

## **Confidentiality clause**

The current master thesis comprises confidential information of MyGon. Publications and duplications of this master thesis – even just in extracts – are forbidden without obtaining a previous written permission of MyGon. The master thesis is only accessible for members of the examination board and reviewers of Universidade Nova de Lisboa.

## **Abstract**

There have never been so many touch points between companies and consumers as there are today, which paradoxically makes it very challenging for companies to be able to retain and engage customers. Gamification is a strategy used by a large number of companies to increase customer engagement and customer lifetime value. This work aims at developing a gamification system for MyGon, a Portuguese startup working in the market of discounts and experiences. In addition to examining the literature concerning gamification, its elements and characteristics, recommendations were developed for addressing MyGon's business goals of increasing conversion and customer engagement. The gamification mechanisms suggested include badges, missions, points, leaderboards and levels.

## Table of contents

Background and Context .....	4
Methodology for a Gamification System .....	8
Step 1. Definition of business objectives .....	8
Step 2. Definition of user behaviours that drive business objectives .....	9
Step 3. Definition of rewards types .....	11
Step 4. Selection of game mechanisms.....	13
Step 5. Configuration and deployment plan .....	24
Step 6. Define KPIs to evaluate progress .....	25
Limitations and future research .....	26
Conclusions .....	27
Bibliography .....	28

## **Background and Context**

MyGon is a startup created in 2011 with the mission to fulfil a gap in the market of vouchers and discounts. MyGon is a solution to search and book real-time vouchers available near users. According to Ricardo Vilares (CEO at MyGon), the main differentiating points of MyGon regarding the competition are: less intrusion, because users receive less communication in their mailboxes; real-time discounts based on location: users can search for discounts happening at that time; users only pay in the points of sale and directly to merchants.

MyGon has a loyalty points system for users already implemented, in which they can redeem points for prizes (appendix A). At this moment, MyGon is only present in Portugal, but the plan is to expand internationally, starting in Spain. Besides the discounts market, MyGon is developing new features, that include transforming the platform into an e-guide for all types of products and services, not only the ones that are running discounts and promotions.

The main service went live on April 12<sup>th</sup>, 2011, and in the next day it topped AppStore's most downloaded apps. Since then, 127.000 users registered at MyGon's website, from which 12% were recommended by other users. MyGon already implemented a customer segmentation based on the time of the last purchase and the total number of purchases.

MyGon currently has 6 main product categories: products/services, hotels, restaurants, bars/coffees, beauty/spa and sports. Restaurants represent 65% of all purchases, strongly supported by the Japanese restaurants subcategory. MyGon is also present in the mobile market (Android, iOS and BlackBerry), representing 50% of total transactions in the restaurants and bars categories. A more detailed analysis of MyGon's historical data can be found in appendix B.

Customer acquisition adds, on average, more than 5.000 new users per quarter, representing, on average, 75% of total transactions in each quarter. This also means that customer retention has a lot of potential to improve. A cohort analysis was performed by quarter. It was concluded that, in average, only 20% of users purchase in the next quarter after their registration.

A common way to analyse customer performance is through customer lifetime value (CLV), which has been defined differently over time. It began being defined as the present value of the expected net profit. It started to be defined as the present value of the expected net profit. In the last decades, several studies included other less tangible factors in CLV, like networking and word of mouth (Singh & Jain, 2013). There are several models to estimate CLV depending on the context of business: discrete or continuous, non-contractual or contractual (Singh & Jain, 2013). Most of them only use data transactions with different assumptions. A simpler approach was considered to estimate the transactional factor of CLV:

***CLV (transactional) = average of transactions \* annual frequency \* lifetime in years***

According to database analysis, the total revenue in 2014 was 117.256€ corresponding to 46.744 transactions and 21.954 unique customers. However, due to the short period of activity of MyGon and the inexistence of criteria to define when a customer is no longer a customer, it was not possible to estimate average customer lifetime and thus, estimate current CLV. The cost of acquisition and cost of retention needs to be included in the CLV estimation (Singh & Jain, 2013). However, due to the lack of information concerning marketing investments, it was not possible to estimate those factors. By the formula considered, the way to increase the CLV directly is either to increase the

customer lifetime (increase retention) or the number of purchases by customer (increase conversion).

Additionally, other factors should be considered when estimating CLV like cross-selling, network effects and marketing activities. Some research has been done in the last year to evaluate another component of network effect, which is the participation in customer communities. However, the research in this field is still at an early stage, yet unsuccessful in defining a way to measure these factors, and thus, how to incorporate them into CLV estimation (Singh & Jain, 2013).

A study performed with online consumers concluded that engaged customers have a higher predisposition to recommend services and products to other users, through word-of-mouth or other social media. At the same time, they are willing to add value through generation of content, helping brands understand customer needs and having an active role in business development (Vinerean, Opreana, & Tichindelean, 2014). The key point identified to increase CLV will be how to engage MyGon's customers and motivate them to perform behaviours aligned with MyGon's business goals.

One way to motivate changes in users' behaviours is through gamification, which is the use of game elements and game-design techniques in non-game contexts (Deterding, Dixon, Khaled, & Nacke, 2011). Gamification is the process of manipulating fun to serve real-world objectives (Werbach & Hunter, 2012). It is one of the strategies that companies are using to change users' behaviour (Blohm & Leimester, 2013), making use of people's need to be social, to share experiences, to collect, to win, to feel valued and be rewarded. Nike+, Nike's online community launched in 2006, allows users to share and compare their achievements in running activities and gain *fuel points*. The members of the community rose from 500.000 in 2007 to 11.000.000 in 2013, and Nike increased their

running shoes market share from 47% in 2006 to 61% in 2009 (Ferriman, 2014). My Starbucks Rewards, Starbucks' loyalty program launched in 2009, provides Starbucks cards to registered users, who can connect with a mobile app, pay for their purchases, earn stars and gain real rewards at stores. After four years, there were 6 million users, with 80.000 new members joining weekly, in which 30% usually paid with the Starbucks card (and app) (Ferriman, 2014).

Another good example of using gamification as human behaviour changer is the transformation of a staircase into a huge electronic piano that increased the number of people taking the stairs instead of the comfortable escalator to 66% (Werbach & Hunter, 2012). Developing a gamification system involves understanding game design and business techniques at the same time. Game elements are considered the toolkit for developing a game. They consist of resources, dynamics, mechanisms, goals and rules (Maan, 2013), which can be embedded separately into activities that are not games themselves (Werbach & Hunter, 2012). Game design, on the other hand, is about understanding how to make those elements fun, addictive and challenging so players become engaged and intrinsically motivated to perform some tasks that are needed to accomplish business objectives (Blohm & Leimester, 2013).

The following table describes some examples of game elements:

<b>Game Elements</b>	<b>Description</b>	<b>Examples</b>
<b>Dynamics</b>	Abstract aspects of the gamification system	Constraints, emotions, narrative (storyline), progression, relationships, etc.
<b>Mechanics</b>	Processes that generate engagement and trigger actions.	Challenges, competition, cooperation, feedback, rewards, transactions, etc.
<b>Components</b>	Specific implementations of mechanics and dynamics.	Achievements, badges, collections, content unlocking, leaderboards, gifts, levels, points, social graphs, quests, virtual goods, etc.

*Figure 1 - Examples of game elements.*

Some research about human motivation demonstrated that people usually feel motivated by well-designed game features. And when people become engaged by games they enjoy, they naturally perform to succeed. (Werbach & Hunter, 2012).

## **Methodology for a Gamification System**

The scope of this project is to increase customer lifetime value through increasing engagement and conversion. To address this issue, a complete recommendation for a gamification system for MyGon was developed. The methodology used was based on the recommendations by Kris Duggan (CEO at Badgeville Inc. and gamification expert) and thus its structure is completely different from conventional methodology used in academic papers. First of all, MyGon's activities were analysed to understand if a gamification system would be suitable to address MyGon's goals, and the conclusion was indeed it fit (appendix C). Developing a gamification system requires a complete study of all the processes and stakeholders of the company. Using game thinking means using all the resources available to create engaging experiences to motivate desired behaviours (Werbach & Hunter, 2012). The following framework was used to develop a gamification program: 1 - definition of business objectives; 2 - definition of user behaviours that drive business objectives; 3 - definition of rewards types; 4 - selection of game mechanisms; 5 - configuration and deployment plan; 6 - definition of KPIs to evaluate progress.

### **Step 1. Definition of business objectives**

MyGon's business goals are to increase engagement and conversion. Companies struggle with getting people to spend time in a website, interacting and using all the features. However, as mentioned before, engagement increases retention and increases network effects, which can then lead to more customers and more purchases (Vinerean, Opreana, & Tichindelean, 2014). As MyGon is a service similar to an e-commerce platform, it was



considered that the key, besides purchasing, is content (comments, reviews) and social interactions (feeds, invitations and shares). MyGon's customer retention has room for improvement. In average, only 20% of new customers have transactions on the following quarter. Retention is also associated with engagement, since brands with engagement are brands with more loyal customers (Werbach & Hunter, 2012). MyGon has a significant number of one-purchase customers (63%), and some of them made that purchase a long time ago. It also means that engagement should start since the first transaction. As mentioned before, there are developments being made to extend MyGon's services, from a portal only for promotions and discounts, to a services guide with premium content, approaching services like TripAdvisor, Foursquare and other references in this field (these two are well-known for developing gamification systems). MyGon will then face tremendous competition, and the main asset is the content (either company-generated or user-generated), very highly related with engagement. MyGon has a lot of registered users, but most of them do not have any purchase (72%). One of the main objectives is to increase the average of purchases per customer, which involves getting people to perform a number of desired behaviours in MyGon's website and app.

## **Step 2. Definition of user behaviours that drive business objectives**

Based on the previously defined business objectives, it is important to specify which user behaviours are important to fulfil those objectives (appendix D). The behaviours were defined based on user experience, feedback from MyGon's managers and some studies. For the gamification program it is important to distinguish between valued behaviours and valuable behaviours (Duggan & Shoup, 2013). The former are the ones that occur naturally, like purchasing or accessing products reviews. The latter are all behaviours that create growth and revenue for the company and therefore comprise the valued behaviours.

A gamification program will help to expand the valued behaviours set to match the valuable behaviours. According to Kris Duggan, it is recommended to reward valued behaviours first, and after they gain acceptance among customers, start rewarding the valuable ones. If the program is successful, those behaviours will become valued behaviours for customers.

It is also important to identify bad behaviours. For instance, making a booking and not showing up without cancelling before is considered a bad behaviour that can damage the relationship between MyGon and the merchants. Another example is making poor or inappropriate comments and reviews. It is critical to understand if the implemented gamification system has loopholes and control them (Duggan & Shoup, 2013). For instance, users will receive points for posting and making reviews which could lead some users to post several repeated comments in a single transaction just to win the points. According to Duggan, there are several anti-gaming mechanisms that can be implemented to avoid bad behaviours which include limiting rewards for repeated behaviours within a certain period of time, limiting the number of actions that users can perform within a certain period of time or limiting the total number of times a user can be rewarded for repeated behaviours.

Sometimes behaviours are connected in a sequenced way (behaviour chain) associated with a specific trigger. By motivating users to perform this threshold behaviour will prompt them to automatically perform the remaining behaviours in that chain (Duggan & Shoup, 2013). An example is when a user claims points. To do this action, a user already opened MyGon app or website (threshold action). After claiming the points, it is time to ask that user to provide comments, feedback and other engagement actions. It is also important to define all chains of behaviour because of the timing and sequence of

rewarding. Rewarding an early action in the chain can deviate users' attention of performing the remaining actions in that chain.

### **Step 3. Definition of rewards types**

Rewards are one of the pillars of gamification. The hope of receiving a reward is a powerful motivator for customers to perform desirable behaviours. There are several types of rewards which can be applied in this gamification program. To understand which types of rewards to use, it is necessary to understand what drives a customer to participate in a game, like pleasure of mastery, rank, status or reputation, de-stress, socialize or just having fun (Duggan & Shoup, 2013).

According to Richard Bartle, there are four main types of players: *explorers*, *achievers*, *socializers* and *killers* (Bartle, 1996). It is important to understand these types of players in order to design the gamification program for MyGon as different people search for different things. Some like challenges and different experiences, others like points and ranking to feel respected, others like interactions with friends while others prefer to do things alone. Usually, players are not exclusively one player type. They exhibit traits of several types in different degrees, so it is important to develop a mechanism that can address all these types of drivers to avoid excluding people.

Another aspect to consider is understanding if the target audience is more competitive (desire to win or be the best) or cooperative (working together to do something). Studies pointed out that this characteristics are highly related with culture (Cox, Lobel, & McLeod, 1991). In western cultures, there is a greater emphasis in competition while in eastern cultures there is an emphasis in cooperation. Once again, it is important to have the right balance to avoid excluding people from this gamification program.

Different players are also driven by two main types of motivations: intrinsic and extrinsic. Extrinsic motivations are rewards that come from outside. In this case, extrinsic motivations can be discounts or exclusive offers. Intrinsic motivations come from within users, and can include rewards that make customers feel good. They often represent growth and development, a sense of identity, self-expression, status, progress and accomplishment (McLeod, 2007).

The main purpose of this gamification program is to foster intrinsically motivated behaviours (Blohm & Leimester, 2013). Customers like to be recognized by their valued behaviours and achievements. It is like a basic human need described in Maslow pyramid, just like esteem needs (McLeod, 2007). According to Duggan, delivering recognition helps increasing customer loyalty while they perceive progress and self-development. It also reinforces users' identity, helping in the generation of communities with the same interests or expertise.

Reputation is a way to attribute expertise to a user. Users will increase their expertise in some categories of a product by purchasing and creating content. Reputation and social interaction have a positive effect in the quality of content shared while identification has a positive effect in the quantity of shared knowledge (Chang, 2011). For the *killers*-type players, what matters is status and winning. It is a competitive element since users' positions will be relative to others. Even for *socializers* who do not care about winning, this competitive mechanism is a way to develop interactions with other friends in the game.

Some users prefer to have objective and measurable privileges than to be rewarded with recognition. This type of rewards is also a way to transfer some accountability to customers in the business itself, at the same time delivering a sense of exclusivity.

However, it is important to emphasize that extrinsic rewards are very persuasive too. Monetary rewards are the most tangible type of rewards which can work very well for some types of users, especially the ones who are more driven by extrinsic motivations to participate in the game, even though, in general, they do not contribute for the development of loyalty after these rewards expire. This type of rewards is more effective in customer acquisition and in reengaging inactive users.

#### **Step 4. Selection of game mechanisms**

In order to increase the probability of success of this gamification system, it is necessary to increase the number of people interacting with MyGon. A new dynamic of purchasing was developed to achieve this purpose (appendix E).

According to Badgeville Inc., a major expert company in Gamification, there are six main gamification frameworks which cover the most basic goals:

	<b>Solo</b>	<b>Community</b>	<b>Competitive</b>
<b>External – Customers</b>	Social Loyalty – Increase conversions and engagement	Community Expert – Increase community engagement	Competitive Pyramid – Increase competition
<b>Internal - Employees</b>	Gentle Guide – Increase low-level employee engagement	Company Collaborator – Increase high-level employee engagement	Company Challenge – Increase company-wide goal-setting

*Figure 2 - Types of gamification frameworks.*

The focus of this project will be on Customer Gamification and will be developed based on the Social Loyalty framework. This framework is about increasing conversions and engagement at MyGon and works based on recognition, visualization of progress and rewards. It includes the tracking of a variety of goals in parallel. Usually, the tasks are well defined with a beginning, a middle and an end, and users are motivated along the way, making progress, finishing challenges and collecting rewards.

This framework includes a lot of different game elements that will be working together to target different goals and different types of players (Bunchball, 2011). The most

common elements used in gamification are points, badges and leaderboards (PBL) (Werbach & Hunter, 2012). The following list contains some of game elements that will be used in this system:

**Points** - allow users to compare different actions and reveal the relative value of each behaviour. When compiled into a score, points act like a measure of progress. They also provide valuable info because they allow the analysis of different metrics on the gamification system and how users are performing and evolving.

**Leaderboards** - show users where they are positioned in relation to other users and friends and boost the desire to play in order to improve their position. In social platforms, this mechanism is highly valued by users.

**Levels** - indicate progress and status. Usually, levels are associated with points.

**Missions** - require performing a set of actions, following a defined path. The actions can occur in a certain order or any order.

**Feedback** - includes the display of real-time notifications when users perform valuable behaviours or receive rewards. A very common way to do this is through the activity feed, which enables users to see what friends are performing in the game and boost engagement.

**Achievements and Rewards** - provide positive reinforcement for valuable behaviours.

After understanding all this concepts, 7 game mechanisms were developed for this gamification program, based essentially on the 3 types of elements (PBL) already mentioned.

All of those mechanisms are integrated and working in parallel since the moment the user is registered. The existence of multiple mechanisms will give a sense of autonomy and

empowerment to customers, since they will be able to define their own strategy and path to succeed. A gamification system where players do not have choices will become boring and disempowering for most of them (Werbach & Hunter, 2012). Besides, all these mechanisms will have the feedback mechanism incorporated (appendix F-1) which means the display of notifications and entries in users' activity feed. This mechanism is very important because it allows to communicate the right message at the right time to trigger the right behaviour. Without this mechanism, people do not realize that there is a game environment (Duggan & Shoup, 2013).

### **Mechanism 1. Points, status level and privileges**

Points are the basics of any gamification system because of their ability to communicate clearly to users that behaviours matter (Bunchball, 2011) (Maan, 2013). Despite representing progress, points are just points, a uniform and abstract concept, unless they serve a higher purpose (Werbach & Hunter, 2012). In this proposal, all behaviours identified will be rewarded with status points in addition to other types of rewards, serving as a feedback mechanism so users understand they are performing something valued. The status points will be distributed according to the importance of each behaviour for business goals, their priority and also based on the power law distribution in engagement (Raban & Harper, 2007). According to this article, there are some behaviours considered as low-threshold because they are easy to perform and require little participation. On the other hand, there are some behaviours that require more effort to perform (high engagement) and thus should be rewarded with higher number of points.

There are three types of points for three different and independent mechanisms with different objectives (multiple point system):

- Points for Status Level (mechanism 1): these points are public and represent an overall status of a user's activity at MyGon. In this scenario, points are used as an external display of progress, becoming a marker of status (points will demarcate status levels). In this case, status points will also be used to encourage competition between users, serving as a score.
- Points for Expertise Level (mechanism 3): private points that only serve to reach the expertise levels and unlock expertise badges.
- Points to Redeem (mechanism 4): private points that can be used to unlock prizes. In this scenario, points are used to make a bridge between progress and extrinsic rewards.

A specific action can result in all types of points or just some of them (appendix F-2). As mentioned before, status is a way of recognition that is highly valued by customers. Status shows progress and a sense of satisfaction when levelling up (Maan, 2013). In this system, users will change level when reaching a defined status point threshold (appendix F-3). “*Leveling up*” signifies progress and offers opportunity for encouraging (Werbach & Hunter, 2012). Each player's level will be displayed along with his or her name and photo throughout all platform. It is also important to name the levels in a way that transmits ascending order and communicates value in a perceived way to other users. And also very important is that levels' names must be fun and in accordance with the context of MyGon (Eranti & Hamari, 2011).

According to their status level, users will be able to unlock some privileges. Privileges mechanisms are usually used to increase loyalty (Lucassen & Jansen, 2014). A list of suggested privileges can be found in appendix F-4. It is important to define which privileges will be unlocked in which levels and communicate this clearly to users. These



privileges should be distributed in all levels, in order to fulfil gaps between levels and keep a constant motivation to go forward. It is recommended to place them in ascending order, meaning that the higher perceived value should be unlocked only on higher levels.

## **Mechanism 2. Badges collection**

Badges are considered the most important type of reward in gamification when talking about achievements (Eranti & Hamari, 2011). They provide goals for users to move forward, having a positive effect on motivation (Antin & Churchill, 2011).

They represent a visual proof that a user performed a valuable behaviour, marking the completion of goals established within the gamification system (Hamari, 2015), serving as reminders of past achievements (Antin & Churchill, 2011). Badges also represent what users are interested in. Analysing other users' badges collections provides a summary of interests and engagement levels (Antin & Churchill, 2011). Badges also answer people's desire to collect things. A badge collection is a book of memories of experiences and achievements. The simple concept of doing things, levelling up and getting a badge is a foundation for motivation (Duggan & Shoup, 2013). Badges usually increase performance and they can be used as a guidance system (Hamari, 2015). Badges are extremely flexible since it is possible to create a badge for everything. In opposition to points, badges keep all players in the game because different players will have different collection of badges depending on what they consider interesting and meaningful (Werbach & Hunter, 2012).

There will be different groups of badges:

- Badges as guidance: rewards to motivate users to perform actions considered important to complete their profile and maximize the potential of engagement

- Badges as motivators: rewards to motivate repetition of identified valuable behaviours that can be performed multiple times.
- Badges as identifiers: rewards related with products purchased by customers.
- Badges as motivation for predefined actions (mechanism 6): exclusive rewards to mark specific actions only available in a certain period.
- Badges as status (mechanism 1 and 3): in this scenario, badges will be used as a virtual status symbol, marking that a user reached a specific level in status and expertise.

Badges dynamics and badges attributes are further developed in appendix F-5.

### **Mechanism 3. Expertise Level**

As mentioned before, people like to feel recognized as experts in some areas. This mechanism motivates people to increase the number of purchases and generation of content within different categories of products. It is also a way to engage users that are only interested in one type of product, which means that those users will not win a lot of different badges available, but at least they will have something to be proud of – their expertise in that type of product. This mechanism will also motivate users to generate content and make them feel more responsible since they will win more points if they provide good content. For example, a person that has several purchases in restaurant campaigns, along with several reviews liked by others users, will be considered as an expert in restaurants. The dynamics and characteristics of this mechanism are developed in appendix F-6.

### **Mechanism 4. Points redemption**

Redeemed points are points that users can win by performing valuable behaviours. Those points can be directly converted into monetary rewards and can be very effective in

persuading users to perform some behaviours, transforming valuable behaviours into valued behaviours (Duggan & Shoup, 2013). It is highly recommend to come up with a more creative name for redeemed points so that users can perceive the difference from status points and expertise points.

Users will win these points mainly by performing highly valuable behaviours for MyGon and lowly valued for users, like for instance: completing the profile at MyGon and uploading a photo, integrating profile with Facebook, inviting friends, selecting interests, installing the Mobile App, etc. Basically, these points will be used to generate more engagement & network lifetime value.

The redeemed points associated with the behaviours do not match status or expertise points. As this is the only mechanism that will represent cost for MyGon, the distribution of these points should be based on MyGon's budget for this specific marketing activity.

It is important to understand that using redeemed points to promote network effect can deliver a big impact on MyGon's growth, since it will be the users promoting MyGon, which means an organic growth instead of a paid growth. Studies pointed out that customers acquired through network effect (like word of mouth) have higher long-term value to the company than customers acquired through fast-acting marketing activities (Singh & Jain, 2013). MyGon will reward users to acquire and engage new customers instead of doing it directly. More suggestions about this mechanism are developed in appendix F-7.

### **Mechanism 5. Leaderboards**

Leaderboards are a mechanism to satisfy human desire for competition and users' natural behaviour of validating their own performance comparing it to peers (Maan, 2013). This mechanism is also associated with status. Usually, higher performance can be achieved

through competitive environments, making this mechanism very popular in gamification to drive valuable behaviours (Bunchball, 2011). But because it is a competitive mechanism, it can also be troublesome. Leaderboards and ranking are public statements of users' performance. Users often want to compare their results with other users, and knowing the distance to move up in the ranking can be a powerful motivator (Werbach & Hunter, 2012). However, visualizing the distance that a user is behind the leader can demotivate and eventually make users drop the gamification system, especially when this distance is high. To avoid that situation, and in addition to the use of other non-competitive mechanisms, some strategies were developed for the leaderboards mechanism. There will be different leaderboards, according to different criteria, increasing the chances of users being well placed in some of them (Werbach & Hunter, 2012). And like Foursquare's example, it is recommended not to have only "All-time" type leaderboards. By creating leaderboards that only consider events of last month or last year, higher chances are being given to new customers instead of privileging only old time customers (with higher accumulated points). Besides, those leaderboards can be global-type (all users) or network-type, considering only users' friends. The latter delivers different emotions and motivations since users are being compared with other users they know. Some badges can be won when users have a really good performance in those leaderboards, like a badge for a user that was 1st place among friends during 5 consecutive weeks.

Statistics are also very important in gamification because they allow users to track performance comparing with a group of users. When communicated to users, they enhance engagement as they allow them to create their own goals (Bunchball, 2011).

Users will be able to view some statistics about themselves and also their networks. Some examples of statistics and leaderboards were developed as suggestions (appendix F-8).

### **Mechanism 6. Missions**

Missions (or quests) can be a relevant mechanism to motivate customers to perform specific behaviours in predetermined and limited periods of time. In this system there will be exclusive badges that people will not have opportunity to win again. It is a win/fail mechanism type.

However, missions differ from badges as follows:

- Missions can have a defined period, defined region or defined campaign;
- Missions are more appealing and challenging to users because they can succeed or fail, while in badges users never fail, they can only win;
- Missions have points that can be customized depending on the importance of the campaign, while in badges, all assume the same importance.

Missions should not be exaggeratedly used to avoid losing the exclusivity or scarcity impact. If there are too many missions, the feeling of exclusivity can be lost.

For players that are Achievers, missions are very important. Users should have the possibility to search missions available by some parameters, like region, gender, category or price-range if possible. However, users should have an immediate contact with missions available when they log in. The default missions available for each user should depend on profile, like for example gender, and current geographic position.

Some missions can be defined as priority if they represent a special deal between MyGon and a specific merchant or group of merchants. However, this type of situations should be avoided not to damage the game's credibility. More details about missions' mechanism and its advantages can be found in appendix F-9.

### **Mechanism 7. The King is in the House**

This is a type of competition that belongs exclusively within a specific campaign, and must be previously negotiated with merchants, like for example, a sushi restaurant that has a campaign running indefinitely. As described in Appendix B, merchants are configuring long running campaigns (with an average duration of almost 2 years). This program is suitable for these extended campaigns.

With this option accepted by the merchant, the person who has more appearances (reservations) in that campaign, will have an extra discount and will be assigned as the King of the Campaign. The King's photo will be displayed in the campaign detail page along with the number of appearances. This number represents a target for other customers in order to achieve the extra discount.

Besides, the king's reviews will be highlighted in the campaign detail page. This small competition within a campaign can increase the number of purchases so there is a direct benefit to the merchant as well. At the same time, MyGon and the merchant are rewarding the king's loyalty as a customer. This program can also work as loyalty card for those restaurants or for other services, so that merchants can know how many times that customer already purchased a specific campaign. When a user passes the King, he or she is considered the new king and starts enjoying the extra discount. The rules of each campaign using this mechanism should be described in the campaign detail page.

### **Integration of multiple mechanisms**

This gamification system includes several game mechanisms that are connected, despite having a different meaning in users' minds. A user scenario was developed to explain how these different mechanisms are connected and triggered after a specific action (appendix G-1). Because users will have different mechanism available from the

onboarding phase, it is expected that they will give different importance to them along the timeline (appendix G-2). Understanding customer motivations to be engaged and how they change through time is important to understand the gamification system life cycle, from the introduction phase (onboarding), to the middle and elder-game phases (Duggan & Shoup, 2013). Some strategies were defined for these different stages (appendix G-3). One of the main purposes of this gamification system, in addition to increasing purchases, is rising the number of interactions between users, increasing the value of this platform for them. Besides, by expanding the network, users are more likely to feel recognised and to be exposed to bigger social influence which will bring them more benefits (Koivisto & Hamari, 2015). There are several ways in which a gamification system increases the network effects' value. One of them is rewarding users for sending invites to their networks. Another way is to display users' activity in their friends' feeds. However, a more engaging way is to give users the possibility of adding other users when completing a purchase, in order for them to also receive rewards associated to that specific purchase. Within this option, users will be able to add friends (registered or not) to the purchase. When a person that is not a MyGon user is added by another user, they will receive an email or a Facebook message with the link to register and collect the points associated with that purchase. As this specific type of invitation already contains rewards, it has a higher value for this person than the regular invites, already used by MyGon (appendix G-4).

The gamification environment should be present everywhere in MyGon's platform to become more effective. But in order to present a gamification status, it is very important to motivate users not to navigate anonymously. In the case of mobile apps, this issue is very easy to solve since the session is always opened. So being, a good way to achieve

this purpose is to promote the use of MyGon mobile apps instead of desktop environment. A series of mock-ups were developed to show how the new purchase dynamic would work at the points of sale (appendix G-5). Some suggestions were developed to integrate this gamification system in MyGon's current desktop platform (appendix G-6). It is very important to communicate and remind users about their progress. Users can track their progress and rewards in their profile page, on the web or mobile app. However, it is also important to remind them more objectively, at least once a month, so they keep motivated and engaged. In appendix G-7, there is a suggestion of a newsletter that can be sent once a month. It includes important data not only reminding users what they already achieved, but also what is missing and what they can achieve in the future. This newsletter is an extra email that users would receive from MyGon, in addition to the regular newsletters already sent. This email also includes some references about friends, so users understand that gamification is highly communicated to other users, increasing the value for customers in terms of reputation and status.

## **Step 5. Configuration and deployment plan**

After consolidating the previous steps, a plan is suggested for the deployment of this gamification system based on the priorities and also considering the way mechanisms are dependent from each other (appendix G-8). It is highly recommended to deploy mechanisms only when they are finished and fully tested for both desktop and mobile application. The time between the deployments of different mechanisms is also important to analyse changes in user behaviours and to educate customers on the new mechanisms available. Another aspect is that deploying different mechanisms in different phases will allow MyGon to track the impact of each mechanism in the KPIs defined.



The deployment of a mechanism includes the following actions: creating database structure; defining names and iconography related; developing related widgets for desktop and mobile application; pre-testing (recommend A/B testing) all features for desktop and mobile application; running security tests; communicating the existence of new mechanism to users.

A suggestion of an entity-relationship model was develop in order to help understand how connected the several mechanisms are and how to store the data (appendix G-9).

### **Step 6. Define KPIs to evaluate progress**

Gamification usually requires a big investment, particularly in terms of time and resources. It is therefore important to follow the results and measure the return on investment. In this field, analytics have an important role. As any e-commerce platform, it is possible to measure and track every interaction between the users and MyGon. However, attention should be paid to avoid falling into the big data trap, as data can become useless if it is not narrowed down to what really matters – the things that drive business goals (Duggan & Shoup, 2013).

Some general KPIs were defined to evaluate the gamification system (appendix G-10). It is necessary to define them before starting the development, in order to ensure that all the information that is needed exists on database. It is also important to keep track of all KPIs before launching the gamification system, to analyse the impact of the system's implementation. Additional KPIs for each mechanism should also be defined to measure its success and to see if those mechanisms are valued by customers. The information retrieved from analytics should be used to make adjustments and improvements in mechanisms to increase their efficiency.

## **Limitations and future research**

This project was subject to different types of limitations representing opportunities for future research and analysis. Regarding the scope of the project, it was not possible to have an accurate estimation of CLV due to the lack of granular information, as acquisition and retention costs. Future research could include the use of this data and develop a consistent CLV model to be used as a continuous KPI for MyGon, including the measurement of lifetime, network and engagement effects on CLV. A market research should be performed to understand when users are no longer customers of MyGon, since users usually do not cancel their registration even if they do not consider themselves as customers anymore.

The mechanisms for the gamification system were developed based mainly in benchmarking and theoretical background provided by studies in this field. The list of behaviours and customer motivations should be completed and consolidated through market research and management discussions with marketing, contents and support departments. There is also limited information regarding customers' motivations when using MyGon which makes it more difficult to predict the type of player they can become in a gamification system.

Other less used mechanisms of gamification should also be studied to understand their advantages for MyGon. The proposed system was developed for all users, regardless of their segmentation. Further research could include the relationship between different mechanisms and different segments of customers, and also the development of strategies for segments based on gamification results and behaviours.

## **Conclusions**

The scope of this project was the development of strategies to increase customer lifetime value (CLV) of MyGon. Literature lets us assume that engagement and word of mouth have a positive effect on CLV. Gamification is about using game elements in non-game context and can be used as a strategy to engage customers and motivate them to perform some behaviours. A gamification system was developed for MyGon, which required a complete analysis of MyGon's activities and processes. Benchmarking and theoretical studies about human motivation and the impact of games on that motivation were used, as well as a framework of six steps.

The business goals identified were to increase conversion and engagement. Different mechanisms were used to meet the different motivations that people have to engage in game environments. Integrating them all and making them meaningful and fun for users was one of the main challenges of this project.

Hopefully, with the mechanisms that were developed, we will see more customers coming to MyGon, and the customers that are already using MyGon, using it more and more socially, both in terms of including more people in their purchases and in terms of sharing their experiences with the community. This should translate into additional earnings for MyGon, and consequently in higher CLV, but also into an increasing sense of engagement within MyGon users' community.

## Bibliography

### Published Articles

- Antin, J., & Churchill, E. (2011). Badges in Social Media: A Social Psychological Perspective. *Proceedings of the 2011 SIGCHI conference on Human Factors in computing systems*. Vancouver, BC, Canada.
- Bartle, R. (1996). Hearts, Clubs, Diamonds, Spades: Players Who Suit MUDs. *The Journal of Virtual Environments*.
- Blohm, I., & Leimester, J. (2013). Gamification - Design of IT-Based Enhancing Services for Motivational Support and Behavioral Change. *Business & Information Systems Engineering Vol. 5 Issue 4*.
- Chang, H. (2011). Social capital and individual motivations on knowledge sharing: Participant involvement as a moderator. *Information & Management* 48, 9-18.
- Cox, T., Lobel, S., & McLeod, P. (1991). Effects of Ethnic Group Cultural Differences on Cooperative and Competitive behavior on a group task. *Academy of Management Journal*.
- Deterding, S., Dixon, D., Khaled, R., & Nacke, L. (2011). From Game Design Elements to Gamefulness: Defining “Gamification”. *MindTrek '11 Proceedings of the 15th International Academic MindTrek Conference: Envisioning Future Media Environments*, 9-15.
- Eranti, V., & Hamari, J. (2011). Framework for Designing and Evaluating Game Achievements. *Digra 2011 Conference: Think Design Play*, (pp. 14-17). Hilversum, Netherlands.
- Hamari, J. (2015). Do badges increase user activity? A field experiment on the effects of gamification. *Computers in Human Behavior*.
- Koivisto, J., & Hamari, J. (2015). Social motivations to use gamification: an empirical study of gamifying exercise. *Proceedings of the 21st European Conference on Information Systems*. Utrecht, Netherlands.

- Lucassen, G., & Jansen, S. (2014). Gamification in Consumer Marketing - Future or Fallacy? *Procedia - Social and Behavioral Sciences* 148, 194-202.
- Maan, J. (2013). Social Business Transformation through Gamification. *International Journal of Managing Information Technology (IJMIT)* Vol.5, No.3.
- Raban, D., & Harper, M. (2007). Motivations for Answering Questions Online. Em T. Samuel-Azran, & D. Caspi, *New Media and Innovative Technologies*.
- Singh, S., & Jain, D. (2013). Measuring Customer Lifetime Value: Models and Analysis. *INSEAD Working Paper No. 2013/27/MKT*.
- Vinerean, S., Opreana, A., & Tichindelean, M. (2014). Analyzing Consumer Engagement Programs from the Perspective of a Qualitative Research of Marketing Executives. *Procedia Economics and Finance* 16, 621-630.

### **Books**

- Duggan, K., & Shoup, K. (2013). *Business Gamification for Dummies*. New Jersey: John Wiley & Sons, Inc.
- Werbach, K., & Hunter, D. (2012). *For the win: How Game Thinking can Revolutionize Your Business*. Philadelphia: Wharton Digital Press.

### **Chapter in a Book**

- Bunchball. (2011). *Gamification 101: An Introduction to the Use of Game Dynamics to Influence Behavior*.

### **Other sources**

- Ferriman, J. (2014, January 13). *Successful Gamification Case Studies*. Retrieved from <http://www.learndash.com/successful-gamification-case-studies/>
- McLeod, S. A. (2007). *Maslow's Hierarchy of Needs*. Retrieved from <http://www.simplypsychology.org/maslow.html>